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International Atomic Energy Agency

Agence internationale de l'énergie atomique

Международное агентство по атомной энергии

Organismo Internacional de Energía Atómica

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Mr. Al Queirolo

ISPO Liaison Officer

U.S. Mission to the International Organizations in
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Austria

In reply please refer to: **M2.05-USA**

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2010-06-23

Dear Mr. Queirolo,

With reference to the U.S. Support Programme, I am pleased to provide the attached new Junior Professional Officer task proposal with a copy of the relevant job description for your consideration.

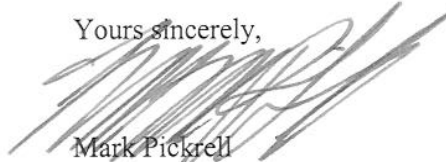
The Department of Safeguards would appreciate the nomination of more than one candidate. This will allow the Department to perform an evaluation of candidates that will result in the most suitable candidate being selected for the task. So that this process may proceed on a timely basis, I have listed the proposal below along with a closing date for nominations and expected start date. Also in order to facilitate the selection process, I would like to ask you to send the candidates' Curricula Vitae and an Agency Personal History Form with the nomination. Of course all information will be treated as confidential.

SP-1 Number	Title	Expected Start Date	Closing Date f. Nominations
10/TSR-005	Junior Professional Officer (JPO) – Engineering Support to the Unattended Monitoring Systems Unit	As soon as possible	As soon as possible

I will inform you of the result of the evaluation as soon as a decision is made. The final documentation for the successful candidate can then be completed through the Support Programmes Coordination Unit and the Division of Human Resources.

I would also like to take this opportunity to express the appreciation of the IAEA for the valuable contribution provided by your Support Programme to the safeguards efforts of the IAEA.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'Mark Pickrell', is written over the typed name.

Mark Pickrell
Acting Director
Division of Technical Support
Department of Safeguards

Enclosure

SP-1 TASK PROPOSAL PART

1. Task Proposal

1.1 Task Proposal ID: 10/TSR-005 Date received in SPA: 2010-06-10

1.2 Task Title: Junior Professional Officer - Support to the Remote Monitoring Unit

1.3 Requester / Division / Section:

1.4 Is this a CFE task? No

1.5 Task Category: E

1.6 Is this a joint task for MSSPs? No

1.7 Is multiple acceptance required? No

If 1.6 or 1.7 is yes, indicate the reason:

2. Project

2.1 Project ID: SGTS-014 Project Type:

2.2 Project Title: Remote Monitoring Systems

2.3 Project Manager / Division / Section: Regula / SGTS / TSR

3. Safeguards Requirement Identification

3.1 What is needed, why and when:

The Remote Monitoring Unit (RM) closely interfaces with all three Operational Divisions to provide communications support to ensure the successful secure handling of safeguards data from over 200 systems in 20 countries around the globe. The operating environment is collaborative, with due regard given to confidentiality. Under the supervision of a Unit Head, the Programmer leverages networking expertise and application development skills to program remote monitoring software, to document current RM software, and to install and upgrade remote monitoring systems in the field

3.2 How will the task results be used and by whom:

The task will result in improved management of various software projects under the responsibility of the Unit. Shortage of human resources in the Division of technical Services forces the priority on deliverables with tight deadlines, leaving tasks with lower priorities like maintaining software and system documentation uncompleted. While this situation is manageable over short periods of time, it will negatively impact the unit in the future.

3.3 Consequences if task is not performed:

Without additional human resources, lower priority tasks will not be completed and higher level P Staff will find project management more difficult.

4. IAEA Proposed Work Outline

4.1 Major task stages with timing:

The scope and timing of work that the Programmer will undertake is as follows:

MONTH 01-02: Familiarization with the Agency's specific procedures and technologies, including, but not limited to documentation, administration, procurement, scheduling, shipping, travel, and training as required.

MONTH 03-12: Maintain the technical software documentation repository associated with the different projects managed by the unit. Maintain the project logbooks, draw system architecture, adopting the actions needed to maintain the overall project status up to date.

MONTH 03-12: Starting to code and contributing to ongoing software projects.

MONTH 03-12: Contribute to the technical activities of the unit, including technical assessments of transfer systems, field testing, and site surveys.

4.2 Support Division(s) / Section(s): SGTS / TSR

4.3 End User Division(s) / Section(s):

4.4 Estimated duration in months: 12

5. Safeguards Approval Process - not displayed

6. Acceptance by MSSP(s) - under review

Job Description for Professional Posts

Position and Grade:	Support to the Remote Monitoring Unit (P-1 or P-2)
Organizational Unit:	Remote Monitoring Unit Section for Surveillance, Seals, and Remote Monitoring Division of Technical Support Department of Safeguards
Duty Station:	Vienna
Type/Duration of Appointment:	Junior Professional Officer / 1 year

Organizational Setting

The Department of Safeguards is the organizational hub for the IAEA's safeguards work. The IAEA inspects nuclear and related facilities under safeguards agreements with more than 140 States.

Within the Department of Safeguards, the Division of Technical Support is responsible for providing technical support in safeguards specific equipment matters to the three Operations Divisions.

The Section for Surveillance, Seals, and Remote Monitoring (TSR) is one of the four sections within SGTS and is responsible for the development, design, testing, installation, maintenance, troubleshooting, and upgrading of all the surveillance, sealing, and remote monitoring systems used by the Inspectorate to meet the Agency's safeguards mission. The Remote Monitoring Unit (RM) closely interfaces with all three Operational Divisions to provide communications support to ensure the successful secure handling of safeguards data from over 200 systems in 20 countries around the globe. The operating environment is collaborative, with due regard given to confidentiality.

Main Purpose

Under the supervision of a Unit Head, the Programmer leverages networking expertise and application development skills to program remote monitoring software, to document current RM software, and to install and upgrade remote monitoring systems in the field.

Role

As an active member of the unit, the Programmer is a substantive contributor, (1) *developer*, performing relevant software engineering disciplines as a member of a team; (2) *resource* for the Unit, taking part in various activities as required, such as quality assurance, documentation and continuous process improvements.

Partnerships

The Programmer works closely with the staff of SGTS-TSR and the other members of the SGTS on the development, monitoring, and improvement of the remote monitoring infrastructure and on enhancing the efficiency of daily data transfers where possible. He/she provides support to the Operations Divisions as needed and shares technical information with external technical contacts such as Member State representatives, facility staff and vendors. Additionally, he/she liaises with States'

R & D organizations and with commercial equipment developers and manufacturers to plan future systems.

Functions / Key Results Expected

- Develop remote monitoring systems to improve communications and data transfers from remote facilities.
- Carry out requirements analysis and design of software systems and develop custom applications for remote and secure data transfers, monitoring, and state of health (SoH) analysis.
- Design, test and implement various network configurations, using the latest firewall, VPN (virtual private network), routing techniques etc., to enhance the existing TCP/IP-based remote monitoring infrastructure.
- Ensure the reliability and availability of safeguards remote monitoring data repositories on a 24/7 basis and ensure that the system meets the performance criteria.
- Provide expert advice and support to Operations Divisions, including the provision of field support during inspections and instruction on the use of instruments, methods and techniques, and writing network/system operation procedures.

Knowledge, Skills and Abilities

- Technical expertise:
 - Thorough understanding of software engineering processes and the software engineering life cycle.
 - Disciplined, methodical approach to requirements analysis and system design.
 - Knowledge of Web programming (Javascript, PHP, PERL, HTML) and knowledge of one or more of C/C++/C#, Java, XML. (MS-C# preferred).
 - Knowledge of relational database management software (e.g. SQL Server) and SQL
- Demonstrated ability to write clear and concise technical reports, procedures, and/or technical specifications.
- Demonstrated capability to work on complex engineering/scientific tasks from the conceptual stage, through prototyping, evaluation, and field-use.
- Demonstrated communication and interpersonal skills, and the ability to establish and maintain effective working relations with Agency staff at all levels.
- Ability to work in a multicultural environment with sensitivity and respect for diversity.

Education, Experience and Language Skills

- University degree in Information Technology or Computer Science.
- Experience in the management of projects with high technical content.
- Networking knowledge to include TCP/IP, routing protocols, VPN, firewalls, telecommunications, and IT security techniques.

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- Practical experience in producing functional specifications and in formulating solutions to meet user requirements.
- Fluency in English required.
- Fluency in other Agency's official languages or German an asset.

NOTE: The incumbent of the post will be considered to be a radiation worker and be subject to an appropriate programme of physical and special medical surveillance arranged by the Agency.

Internal Human Resources use only:	
Effective Date:	
Occupational Group(s):	
Post Number:	